

REMARKS

Claims 1-9 are pending in the application. Claims 5-8 have been withdrawn from consideration. Claims 1-4 and 9 have been rejected based on newly cited references.

The Examiner rejected claims 1-4 under 35 USC 102(e) as being anticipated by Barker et al. (US6363421). Claim 9 was rejected under 35 USC 103(a) as being unpatentable over Barker in view of Liem et al. (US5960342). The rejections are respectfully traversed.

In traditional telecommunications equipment, internal management information of a network element is usually made available through an SNMP interface, a command-line interface (e.g., TTY or telnet) or a specialized (and often proprietary) protocol. The network element is typically managed only by its associated element management system. This approach makes it difficult to share management information from the network element across different operations support systems (OSSs) that might already be in place in the public switched telephone network. When such sharing is necessary, it is generally done by providing a special communications link between the element manager and a specific operations support system. This approach is limiting because the interface at the network element may not have provided the information required by the legacy OSS. In addition, the element manager then must always be active for the OSS to operate. This reduces the reliability of the resulting network because the element manager is typically an ordinary PC or desktop workstation rather than a high-reliability network element. This often means that costly development work is needed in the element manager, the OSS, and the network element itself to provide this capability.

The present invention is directed to an approach that alleviates these problems. Rather than build managed objects in the network element using a proprietary scheme, a management subsystem in the network element is built around a CORBA (Common Object Request Broker Architecture) server at its core. That is, the CORBA server is a component of the network element or “managed system” rather than part of the “managing system”.

An embodiment in relation to a network element referred to as CPA 42 is shown in FIG. 28. The managed objects are written as CORBA objects; thus, the capabilities of the network element are available through a CORBA interface. FIG. 28 shows the CORBA server 386 as part of the network element CPA 42. Managing systems shown in FIG. 28 include SNMP Manager 56B and carrier operation systems 397.

There are several advantages of the CORBA-based configuration. For example, by basing the internal management scheme on CORBA, instead of raw memory, it is very easy to add new protocols as CORBA clients, such as the BellCORE TL1 protocol, if desired to inter-operate with OSSs. Another advantage is that if the element manager should be turned off or fail for some reason, the other OSSs can still communicate with the CPA directly, thereby leading to greater overall system reliability and availability.

In the rejection of claim 1, the Examiner indicated the view that Barker shows a managed network element that includes a CORBA server, plural CORBA-based managed objects accessible by the CORBA-based server, and a CORBA-based applications programming interface coupled to the CORBA-based server. In support of the rejection, the Examiner cites col. 4, lines 27-36 and 37-55; col. 5, lines 65-67, col. 6, lines 1-8, col. 7, lines 46-56; and col. 8, lines 59-64. However, as will be made clear herein, nothing in the cited passages of Barker supports the conclusion that a managed network element includes a CORBA-based server.

Barker is similar to previously cited reference Park in that it discloses CORBA components that are part of a Management System for managing network elements, not the Managed System. This is clearly shown in Barker, FIGs. 2 through 5. In particular, the CORBA components (e.g., CORBA element 48, FIG. 2) are shown as part of the Element Management System Client 28 and Element Management Server 32. The Client 28 and the Element Management Server 32 are not being managed. Rather, the Network Element 14, which has no CORBA-based server, is the managed element that is managed by the Client 28 and Element Management Server 32. As stated in the Abstract, "at least one of the plurality of network elements is also coupled to the element management server through the computer internet and the at least one of the plurality of network elements is managed via communications conveyed through the element management server between the management computer and the at least one network element." Indeed, there is no teaching or suggestion in Barker regarding use of a CORBA-based server in a managed network element. The cited reference Liem adds nothing with respect to use of a CORBA-based server in a managed network element.

Thus, neither Barker alone or taken together with Liem teach or suggest a managed network element in a telecommunications network of network elements and management systems for managing the network elements, that includes a CORBA-based server; plural

CORBA-based managed objects accessible by the CORBA-based server; and a CORBA-based applications programming interface coupled to the CORBA-based server, as recited in claim 1. Reconsideration of the rejections is respectfully requested.

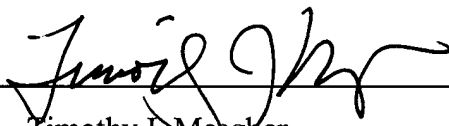
CONCLUSION

In view of the above remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.

By



Timothy J. Meagher
Registration No. 39,302
Telephone: (978) 341-0036
Facsimile: (978) 341-0136

Concord, MA 01742-9133

Dated:

5/10/04